

to a Slag, or half vitrified Substance ; whereas the same Heat, had it been Ivory or Bone, would have reduced it to a white Ash like Bone-Ashes ; for I exposed it to such a Fire as vitrified the Tile that cover'd it. Its Hardness and Consistence to an Engraver's Tool seems to be the same as common white Marble : Its Colour is not mended by Heat, but it grows brittle when red hot.

This Specimen, now shewn to the *Society*, was about 12 Inches long, 5 Inches broad, and in some Places near 2 Inches thick ; rough on the under Side, as though broken off from the Rock it had been affixed to ; and the upper Side was composed of smooth polished Knobs, in Form like to the botryoid Iron Ore.

Sir *Hans Sloane*, in his noble *Museum*, has several Specimens of these oriental *Turquoises*, all botryoid ; especially a Mass from *China*, about three Inches long, two broad, and near an Inch thick : All which seem to be Copper Ores : And he has likewise Samples of *Turquoises* from *Spain*, and the South of *France* ; which are all small, and seem really to be Pieces of Ivory tinged with Copper.

XVIII. *A Description of a curious Echinites ;*
by Mr. Henry Baker, F. R. S.

Read Feb. 26.
1746-7.

MR. *Baker* takes the Liberty of shewing the *Society* a very extraordinary *Echinites*, the like to which he has never seen in any *Museum*, or found described by any Author. For the *Echinities* usually met with, are made up either of Chalk or Flint, or some stony, chalky, or

sparry

sparry Matter, formed within the Shell of the *Echinus*, and taking their Figure thence as in a Mould: Which Shell is oftentimes broken off and gone, but remains at other times impregnated with talcy or sparry Particles: Whereas the Subject now laid before us is composed of a transparent crystalline Substance, which has received its general Figure by having been circumscribed within the Shell of some *Echinus*, and shews linear Ridges and Divisions correspondent to the Lines and Plates found in this kind of *Echinus*.

Was this all, it would be a very uncommon Production, as these Bodies have been very rarely known to be formed of Crystal *; but it is render'd much more curious and extraordinary, by having exact Rows and Series of little Cells, all of the same regular Figure, though lessening gradually in Size, as they ascend from the Base upwards. (*Vide* Fig. 3.

This Body having been formed within the Shell of an *Echinus*, one would expect (as is the Case in all other *Echinites* usually known), that its Figure should be exactly answerable to the Mould wherein it was formed; but Mr. *Baker* begs Leave to take notice, that the *Echinus*' Shell is perfectly smooth internally, having no rising Parts correspondent to these Cells or Cavities; and therefore, as it could not receive its Configuration from thence, it must be owing to the natural Shooting of the crystalline Matter

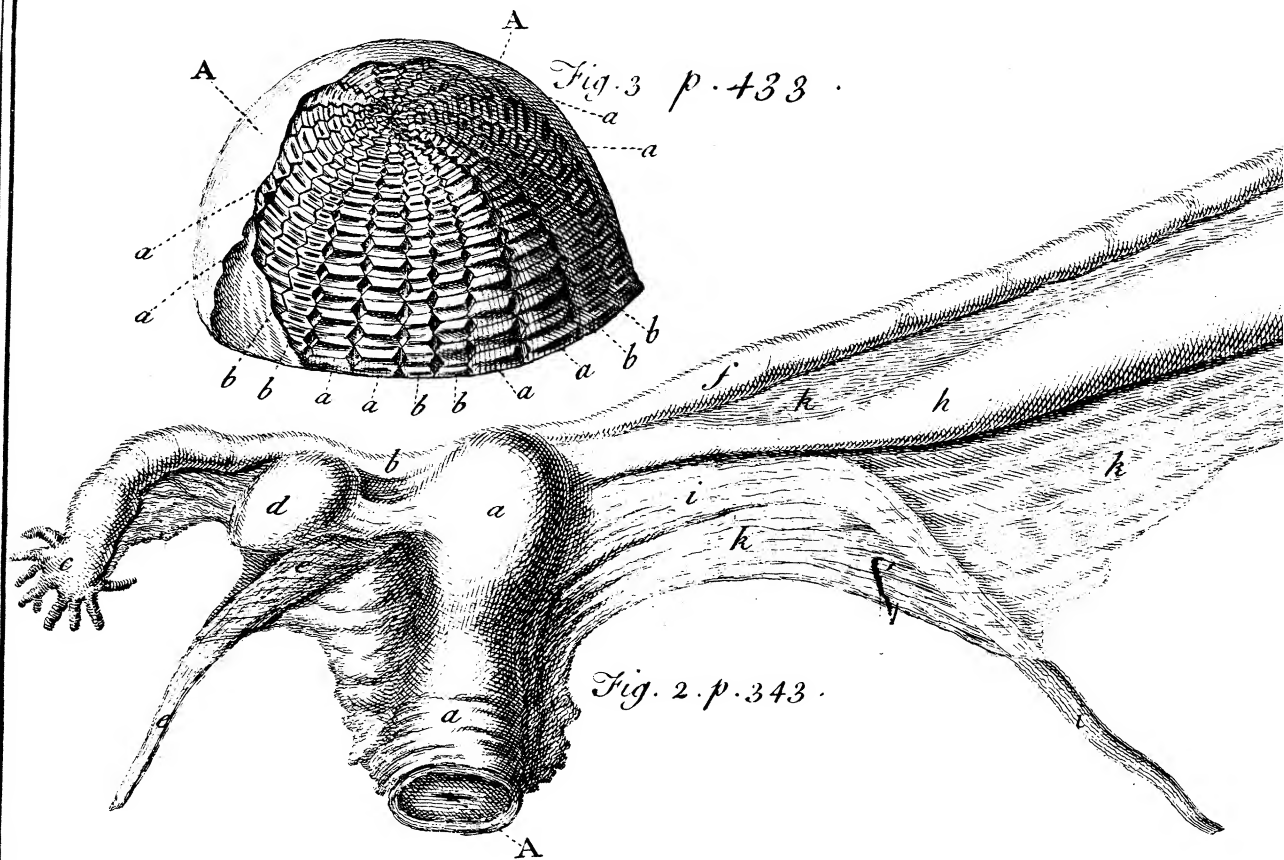
* Sir *Hans Sloane* has a Mass, which was form'd within an *Echinus*, the Shell being broken off; it is one Half or Side Crystal, the other Side Chalk.

Matter (tho' unlike every thing of that kind yet described), or to some other Cause, which he don't pretend to know †.

The Configuration seems nevertheless in some measure to correspond with the Nature of the Shell wherein it was formed : As to the Number of the Rows of Cells, they being ranged by Fives, as the *Papillæ*, *Indentings*, *Lines*, or other *Marks* on the recent Shells of *Echini* constantly are ; these Rows are twenty in Number ; viz. five double Ranks of large and extremely regular Cells, as at *aa*, &c. between which lie five other double Rows of smaller and less distinct *Cellulæ*, shewn at *bb*, &c. These Cells, which are hexagonal, and whereof those in every Row lie alternately to those of the next (by which means they fill up the whole Space), decrease in their Size gradually, as they approach nearer to the Top ; all the Rows at last almost concentring at the *Apex*, leaving only a small Space or Vacuity, where in the Shells themselves of this kind of *Echinus* there is an Aperture. The smooth Part at *A* is formed of a pebbly Stone, bearing the same Marks as are usually found in the Impression of these *Echinities* dug up in Gravel-Pits ; which proves, that this must have receiv'd its general Figure from one of those Shells, whatever has been the Cause of this remarkable Configuration of the crystalline Part.

This curious *Echinite* was found in a Marl-Pit at *Baborough*, about three Miles West of the City of *Norwich*, and presented to Mr. *Baker* by Mr. *Wm. Arderon*, F. R. S.

† Perhaps to some Cells or Membranes belonging to the Body of the *Echinus*. C. M.



1 2 3 4 Inches

